

Overview of the Developmental Testbed Center: Facilitating R2O for Numerical Weather Prediction

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ABSTRACT

The primary mission of the Developmental Testbed Center (DTC) is to facilitate the transition of research related to Numerical Weather Prediction (NWP) into operations. To fulfill this mission, the DTC (i) provides user support for community NWP systems in close collaboration with the system developers, (ii) partners with developers distributed throughout the NWP community to include new contributions in the centralized codes; (iii) performs testing and evaluation of promising new NWP techniques, as well as operational systems, to inform the operational implementation process, and (iv) brings together the research and operational NWP communities through workshops, tutorials and the DTC Visitor Program. Currently, the DTC focuses its activities in five task areas: mesoscale modeling, data assimilation, hurricanes, ensembles and verification. In this presentation, we will highlight results from recent testing and evaluation activities and how these tests have the potential to impact future operational implementations. We will also present examples of how the DTC has engaged the research community in its testing and evaluation activities such that they have the potential to make valuable contributions towards advancing the skill of the U.S. operational NWP systems. We anticipate that the DTC will expand its mission to include high-resolution global modeling in the future, to support the development of the Next-Generation Global Prediction System (NGGPS) at the National Weather Service.